ST-SB920

SERVICE MANUAL

AEP Model
UK Model

SPECIFICATIONS

FM tuner section

Frequency range	87.5 – 108.0 MHz
Aerial terminals	75 Ω, unbalanced
Intermediate frequency	10.7 MHz
Sensitivity	at 26 dB quieting (mono) 10.3 dBf, 0.9 µV/75 Ω at 46 dB quieting (stereo) 38.5 dBf, 23 µV/75 Ω
Usable sensitivity (IHF)	10.3 dBf, 0.9 µV/75 Ω
S/N	at 40 kHz deviation 80 dB (mono), 76 dB (stereo)
Harmonic distortion	WIDE 0.035 % (mono), 0.045 (stereo) NARROW 0.055 % (mono), 0.075 (stereo)
Frequency response	30 Hz – 15 kHz (+0.3/–0.7 dB)
Separation	50 dB at 1 kHz
Selectivity	at 400 kHz WIDE 85 dB NARROW 90 dB at 300 kHz WIDE 45 dB NARROW 70 dB
Output	at 40 kHz deviation 600 mV

AM tuner section

Frequency range	MW: 522 – 1,611 kHz (9 kHz step) LW: 144 – 288 kHz (1 kHz step)
Intermediate frequency	450 kHz
Usable Sensitivity	(with AM loop aerial) MW: 200 µV/m LW: 700 µV/m
Signal-to-noise ratio	MW: 54 dB (50 mV/m, 999 kHz) LW: 50 dB (50 mV/m, 216 kHz)
Harmonic distortion	0.3% (50 mV/m, 400 Hz)
Selectivity	50 dB

General

Power requirements	220 – 230 V, AC 50/60 Hz
Power consumption	12 W
Input impedance	75 Ω
Input connector	IEC-male
Dimensions	430 × 86 × 295 mm (w/h/d)
Weight	3.95
Supplied accessories	Audio cord (1) AM loop aerial (1) FM wire aerial (1) EON connecting cord (1)

Design and specifications are subject to change without notice.

FM STEREO FM-AM TUNER

MC-Service

MICROFILM

SONY®

TABLE OF CONTENTS

1. GENERAL ····· 2

2. TEST MODE ····· 3

3. ELECTRICAL ADJUSTMENT ····· 5

4. DIAGRAMS

4-1. Circuit Board Location ····· 8
4-2. Schematic Diagram – DISPLAY SECTION – ····· 9
4-3. Printed Wiring Board – DISPLAY SECTION – ····· 11
4-4. Printed Wirng Board – TUNER SECTION – ····· 13
4-5. Schematic Diagram – TUNER SECTION (1/2) – ····· 15
4-6. Schematic Diagram – TUNER SECTION (2/2) – ····· 17
4-7. IC Pin Function ····· 19
4-8. IC Block Diagram ····· 20

6. EXPLODED VIEWS

6-1. Front Panel and Case Section ····· 21
6-2. Panel and Display Section ····· 22

7. ELECTRICAL PARTS LIST ····· 23

SAFETY-RELATED COMPONENT WARNING!!

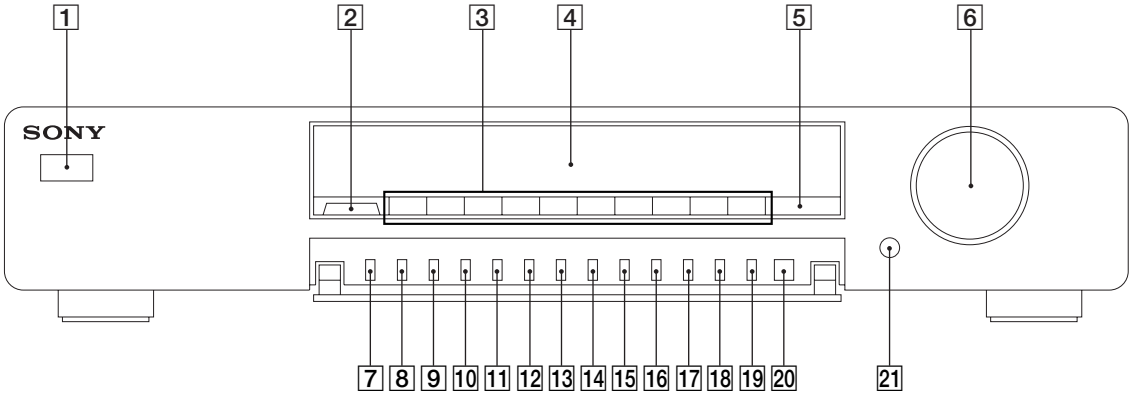
COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MODEL IDENTIFICATION
— BACK PANEL —

PARTS No.	MODEL
4-998-494-0☐	AEP model
4-998-494-1☐	UK model

SECTION 1
GENERAL

Location of Controls



1 POWER swtich (⏻)
2 SHIFT button
3 Numeric button
4 Display window
5 DIRECT button
6 TUNING/SELECT knob
7 DISPLAY button
8 PTY button
9 TA button
10 NEWS/INFO button
11 AUTO-BETICAL SELECT button
12 MEMORY button
13 BAND button
14 ON/OFF button
15 ANTENNA button
16 FM MODE button
17 CHARACTER button
18 MENU button
19 RETURN button
20 ENTER button
21 TUNING MODE button

SECTION 2
TEST MODE

1. Circuit Check Mode

Set to the reception frequency that the curcuit can STEREO RDS stations. (Set the input level to above 70 dB.)
This enables circuit check to be performed in any of the reception modes-FM, AM (MW, LW). Set to a desired band before setting the test mode.

1. Turn OFF the power.
2. While pressing [4] and [AUTO-BETICAL SELECT] together, turn ON [①].

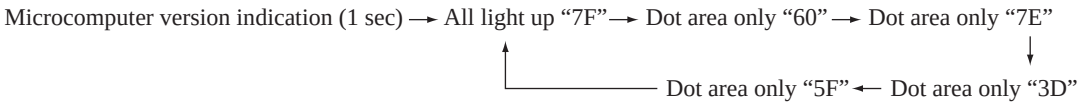
- The items in the following table will be checked automatically in order every 2 seconds.

Display	Items	DISPLAY		NG
		FM RDS	AM (MW, LW)	
Tuned	$\overline{\text{AST}}$ signal = LOW	OK or NG		IC251 NG, RV251 adjustments
IF Frq	IF COUNT OK	OK or NG	OK or NG	FE101, IC251 NG, or IF count buffer amp (Q251, Q401) NG
Sig Level	SI LEVELh 70dB	OK or NG	OK or NG	IC221 NG, RV221 adjustments
Stereo	$\overline{\text{ST}}$ signal = LOW	OK or NG		IC301 NG, RV301 adjustments
RDS Signal	RDS DATA OK	OK or NG		IC801 NG

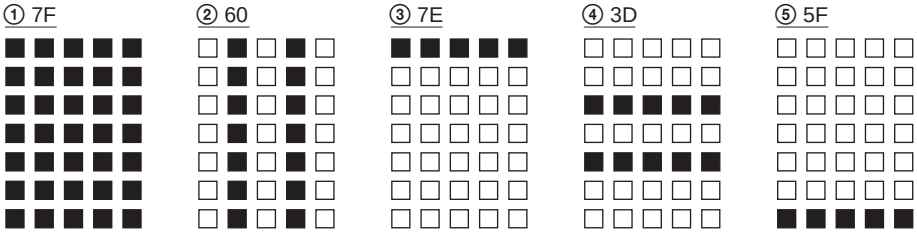
NOTE : The preset data will be erased when this test mode is used. Therefore, take down the data before setting this mode and preset the data again after completing operations in this mode.

2. Display Tube Check and KEY Check mode

1. Turn OFF the power.
2. While pressing [1] and [AUTO-BETICAL SELECT] together, turn ON [①].
3. While continuously pressing [1] and [AUTO-BETICAL SELECT] together, check the following.



Indication test pattern



* The indication test pattern from ② to ⑤ are indicated on only even grids.

The display changes every 1 sec.

4. Release [1] and [AUTO-BETICAL SELECT]. The KEY CHECK mode will be set.
5. All key numbers will be displayed.
   Key Number : 27

6. Each time the key is pressed, the key number will be counted down.
   Each key will be counted only once, at the first time.
7. When all keys have been pressed, the process will end.

3. Entering the Factory Preset (In case perform just to write memory of the Factory Preset.)

NOTE : As contents of the Factory Preset will be written into memory after completing this check mode, delete contents of memory according to 4. Forced RESET.

1. Turn OFF the power.
2. While pressing [3] and [AUTO-BETICAL SELECT] together, turn ON [⏻].

4. Forced RESET (Used to delete the contents of Factory Preset when it is written into the preset memory.)

Clears all the RAMs and sets the initial state

1. Turn OFF the power.
2. While pressing [5] and [AUTO-BETICAL SELECT] together, turn ON [⏻].
3. When “All clear” is indicated on the display tube, it means that “Forced Reset” has been completed.

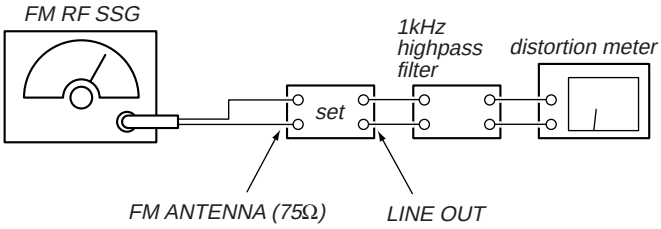
SECTION 3
ELECTRICAL ADJUSTMENTS

Precautions in Repairing

If the front end unit fails, it is difficult to repair the inner circuits, so replace the entire front end unit.

Set “IF : WIDE” after the all adjustments.

FM SECTION **0dB = 1µV**



- Standard Setting of FM Stereo RF Signal Generator.

STEREO STANDARD SIGNAL	MONAURAL STANDARD SIGNAL
Carrier frequency : 98MHz Modulation : Audio 1kHz Main channel (L+R) : 33.75kHz deviation Sub channel (L–R) : 33.75kHz deviation Pilot : 7.5kHz Deviation	Carrier frequency : 98MHz Modulation : Audio 1kHz 75kHz deviation

How to switch IF BAND : WIDE/NARROW and ANT ATT : ON/OFF

Method 1:

1. Set the reception mode to FM.
2. Push the [MENU] button and turn the [TUNING/SELECT] to indicate “Reception” on the fluorecent display tube, then press the [ENTER] button.
3. Rotate the [TUNING/SELECT] knob in the clokwise direction. (Proceeds onto the step 5 when rotated in the counterclokwise direction.)
4. Turn the [TUNING/SELECT] knob to indicate “ANT ATT : OFF” on the fluorescent display tube, then press the [ENTER] button.
5. Turn the [TUNING/SELECT] knob to indicate “IF : NARROW” or “IF : WIDE” on the fluorescent display tube, then press the [ENTER] button.
   When the IF BAND : NARROW is set, “NARROW” is indicated on the fluorescent display tube.
6. Set WIDE after the operation.

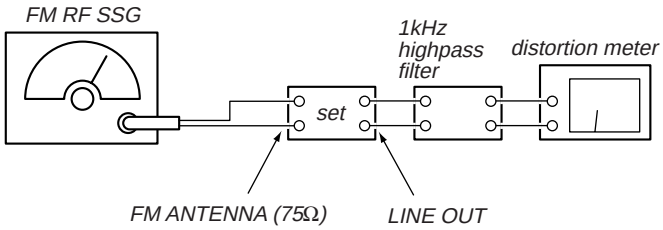
* When set to standby for inputs using the [TUNING/SELECT] knob, “SELECT” is indicated on the fluorecent display tube.

Method 2:

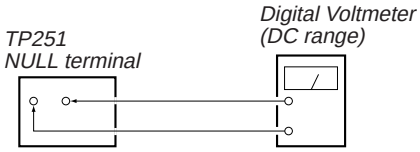
After the test modes “2. Display Tube Check and KEY Check mode” or “3. Entering the Factory Preset”, “IF : NARROW” and “IF : WIDE” are switched every time pressing RETURN button the IF BAND : NARROW is set “NARROW” is indicated on the fluorescent display tube.
Likewise, the mode can be switched between “ANT ATT : ON” and “ANT ATT : OFF”. When set to ANT ATT : ON, the fluorescent display tube indicates ANT ATT.

FM Discriminator ADJUSTMENT
(NULL and MONO Distortion Adjustment)

Setting:
IF BAND : WIDE
ANT ATT : OFF



Modulation : Monaural Standard signal
Output level : 6mV (76dB) (at 75 Ω open)



Procedure:

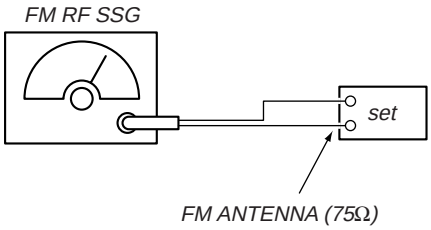
1. Tune the set to 98 MHz.
2. Adjust IFT252 for 0V reading on the digital voltmeter.
   ..... NULL
3. Adjust IFT253 for a minimum reading on the distortion meter.
   ..... MONO Distortion (THD)
4. Repeat the adjustments of 2 and 3 several times.

Note : When replacing the ceramic filter, perform this alignment.

MC-Service

Stereo Level Adjustment

Setting:
IF BAND : WIDE
ANT ATT : OFF

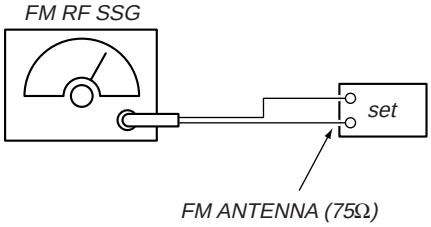


Modulation : Stereo Standard signal
Output level : 18μV (25dB) (at 75 Ω open)

Procedure:
1. Tune the set to 98 MHz.
2. Adjust RV251 to the point (moment) when the "STEREO" indicator will change from going off to going on.

Narrow Gain Adjustment

Setting:
IF BAND : NARROW
ANT ATT : OFF

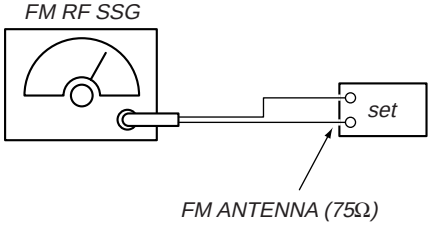


Modulation : Stereo Standard signal
Output level : 18μV (25dB) (at 75 Ω open)

Procedure:
1. Tune the set to 98 MHz.
2. Set "IF BAND : NARROW" according to the procedure of "How to switch IF BAND WIDE/NARROW" on page 6.
3. Adjust RV231 to the point (moment) when the "STEREO" indicator will change from going off to going on.

FM Meter Level Adjustment

Setting:
IF BAND : WIDE
ANT ATT : OFF

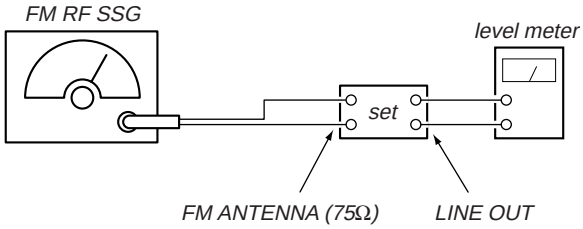


Modulation : Stereo Standard signal
Output level : 3mV (76dB) (at 75 Ω open)

Procedure:
1. Tune the set to 98 MHz.
2. Press DISPLAY button to display the digital signal, then adjust RV221 to be display as "SIG 70dB".

Stereo Separation Adjustment

Setting:
IF BAND : WIDE



Modulation : Stereo Standard signal
Output level : 6mV (76dB) (at 75 Ω open)

Procedure:
1. Refer to "How to switch IF BAND WIDE/NARROW" on page 6.

FM stereo Signal generator Output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV301 for minimum reading on Level meter
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV301 for minimum reading on Level meter

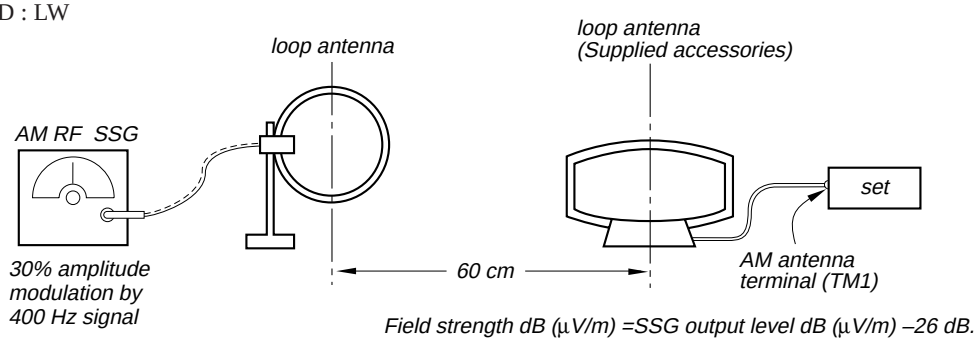
L-CH Stereo separation : Ⓐ – Ⓑ
R-CH Stereo separation : Ⓒ – Ⓓ

The separations of both channels should be equal.

AM SECTION

AM Meter Level Adjustment

Setting:
BAND : LW



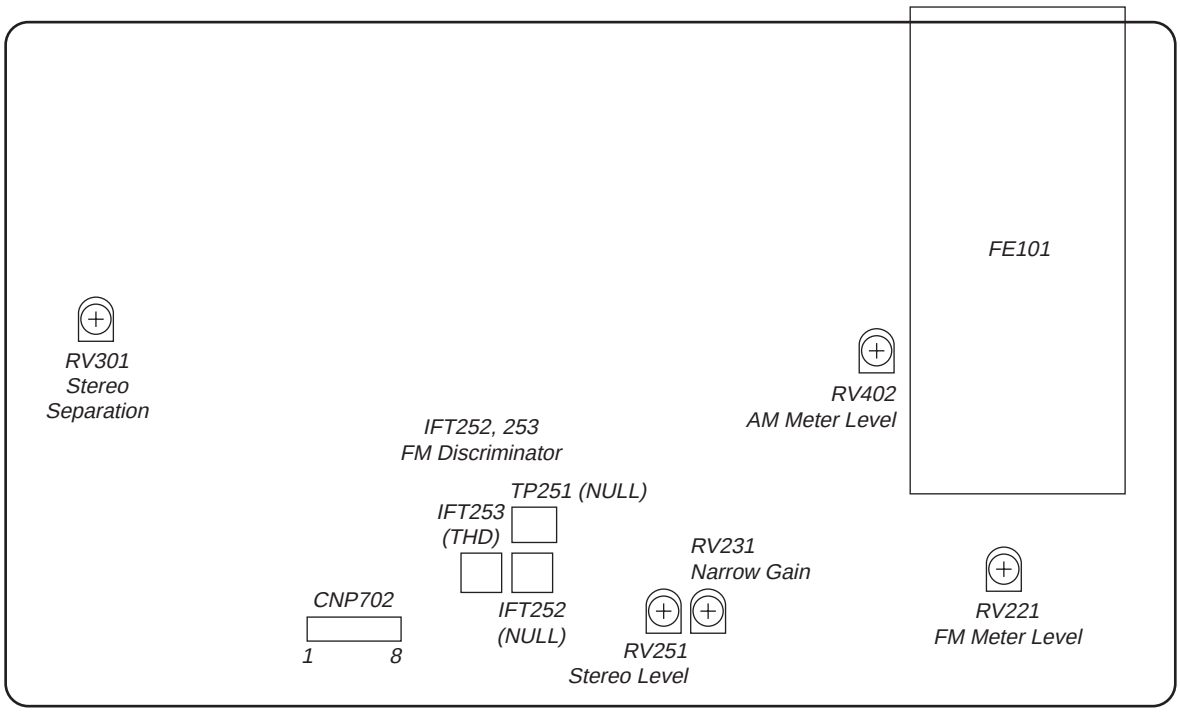
Field strength dB (μV/m) =SSG output level dB (μV/m) –26 dB.

Carrier frequency : 216kHz
Modulation : AUDIO 400Hz, 30% modulation

Procedure:
1. Set AM RF signal generator so that the AM antenna input level becomes 74dBμ/m.
2. Adjust RV402 so that 1 to 10 indication bars light up on the signal meter.

Adjustment Location

[TUNER BOARD] — Component Side —



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

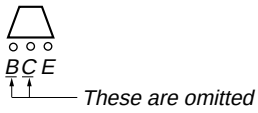
- B+ : B+ Line.
- B− : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : MW
  < > : LW
  ∗ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM

For printed wiring boards.

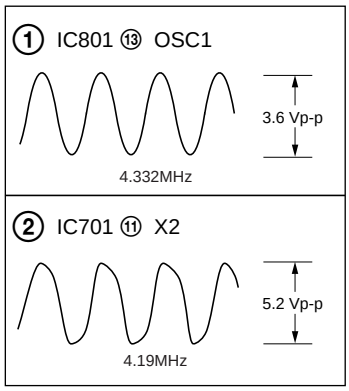
Note:

- ○——— : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.

• Indication of transistor

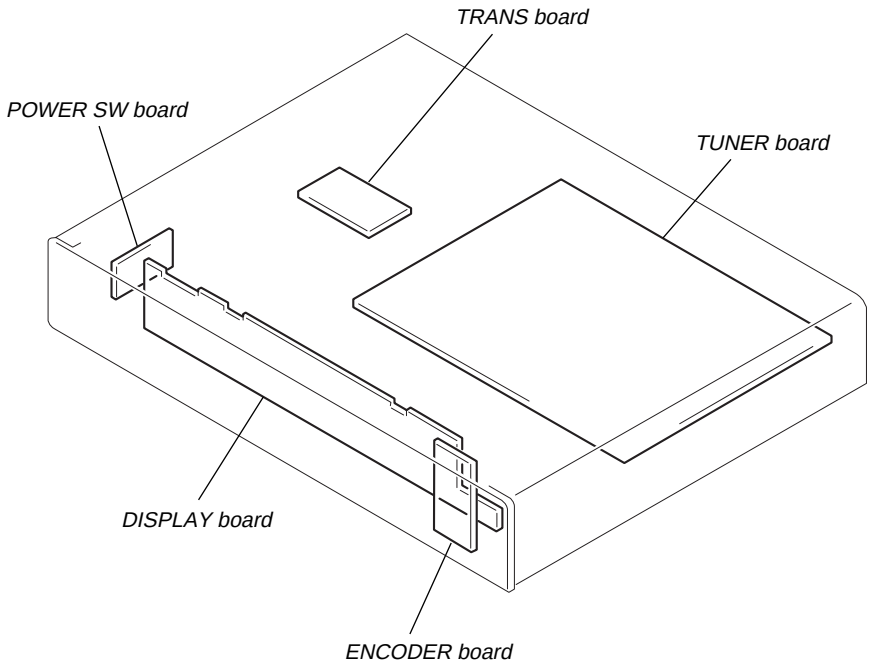


• Waveforms



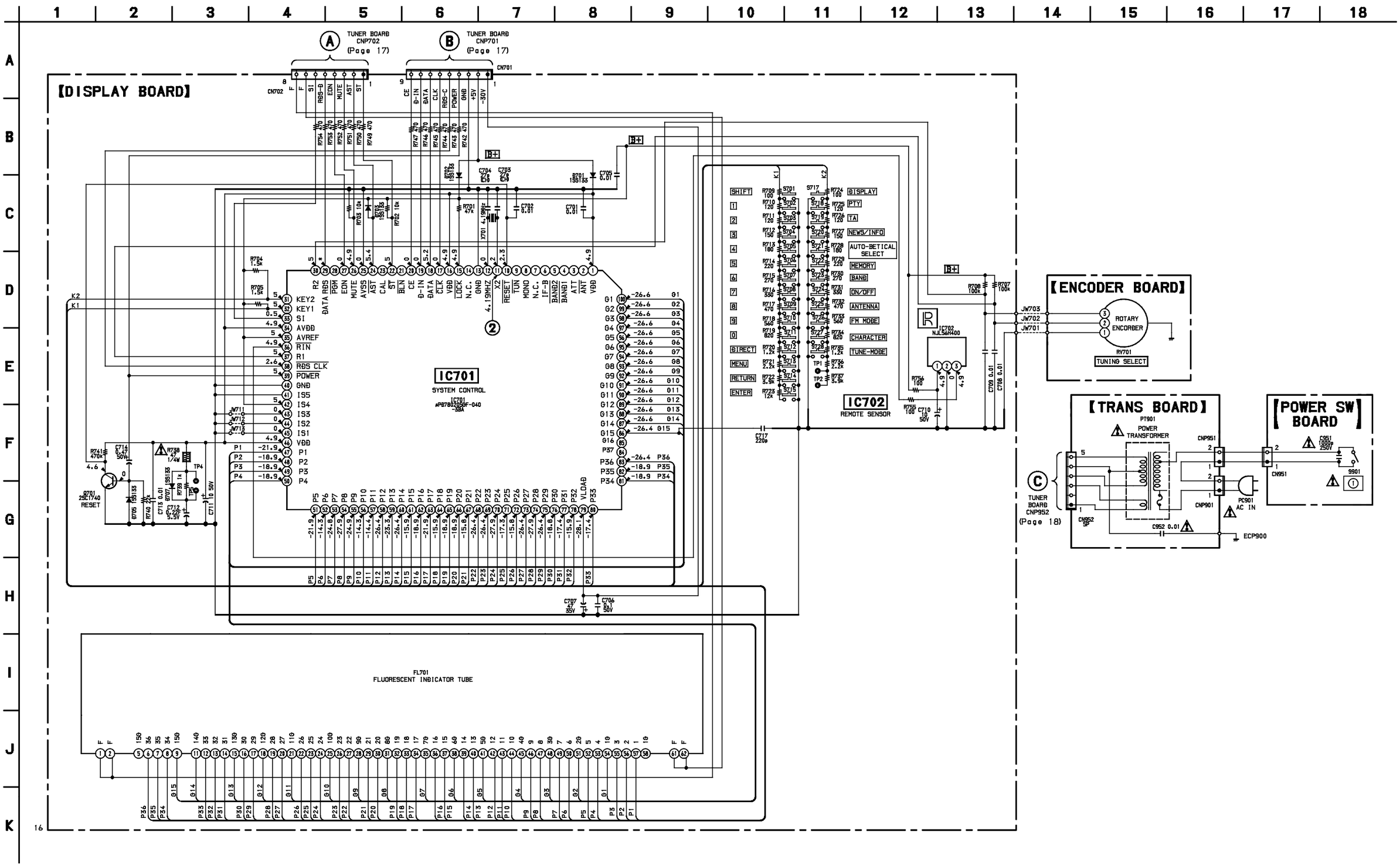
SECTION 4
DIAGRAMS

4-1. CIRCUIT BOARDS LOCATION



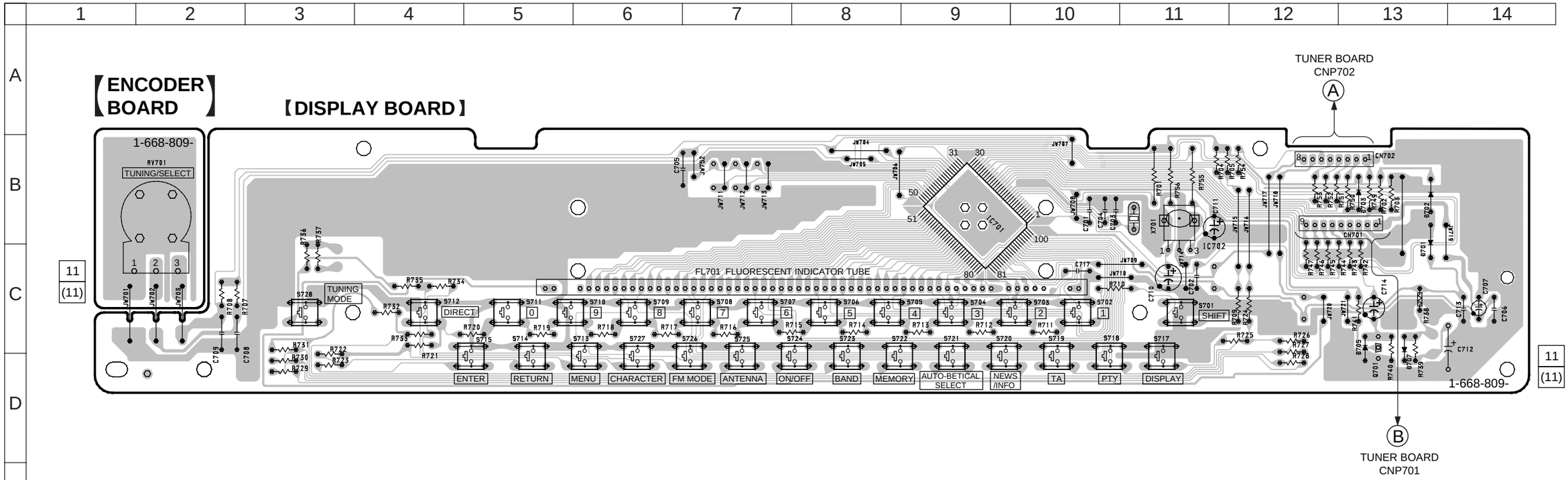
4-2. SCHEMATIC DIAGRAM – DISPLAY SECTION –

• See page 8 for Waveforms. • See page 19 for IC Pin Function.



4-3. PRINTED WIRING BOARD – DISPLAY SECTION –

• See page 8 for Circuit Boards Location.



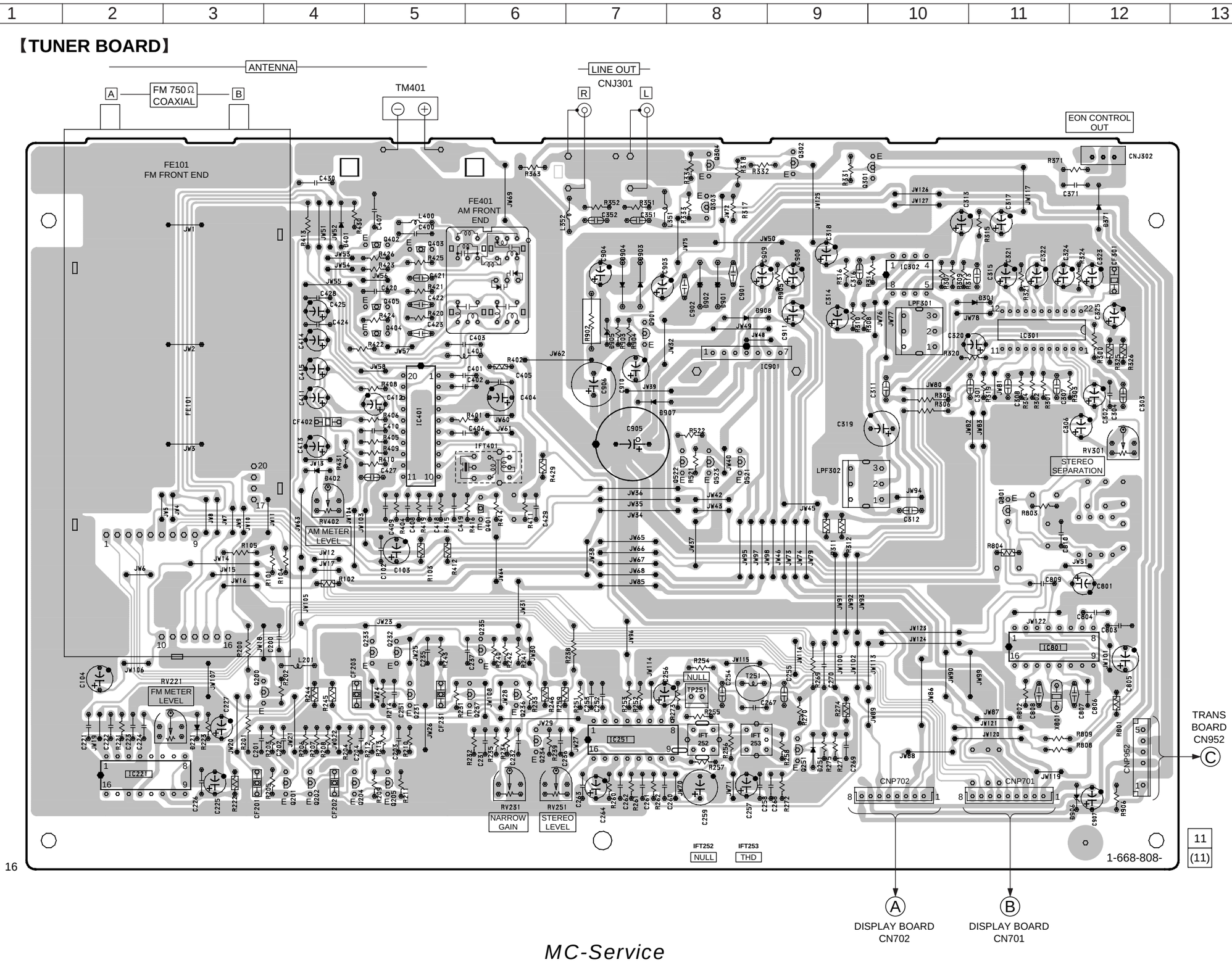
• **Semiconductor Location**

Ref. No.	Location
D701	C-13
D702	B-13
D703	B-13
D705	C-13
D707	D-13
IC701	B-9
IC702	B-11
Q701	C-13

4-4. PRINTED WIRING BOARD – TUNER SECTION –

• See page 8 for Circuit Boards Location.

【TUNER BOARD】

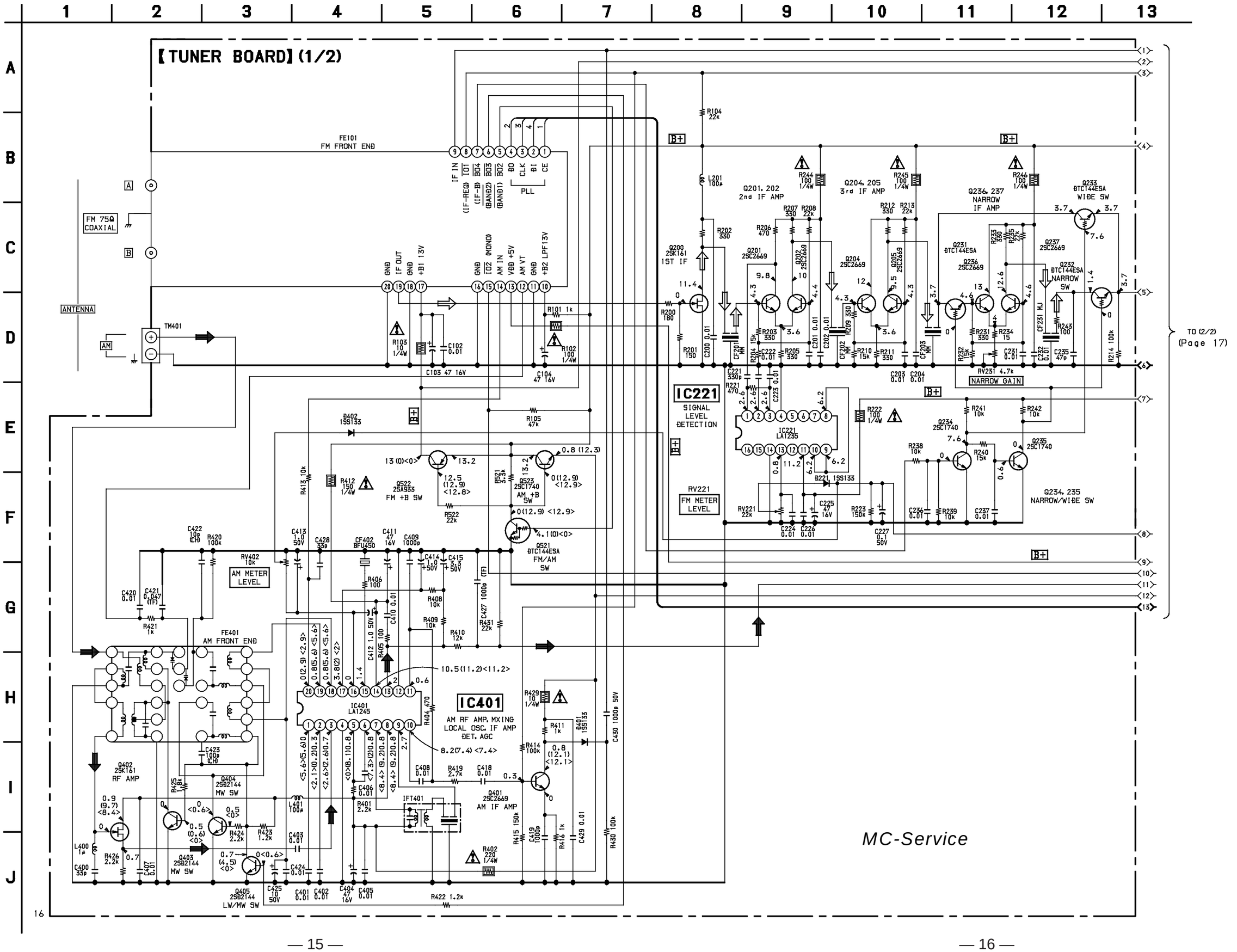


• **Semiconductor Location**

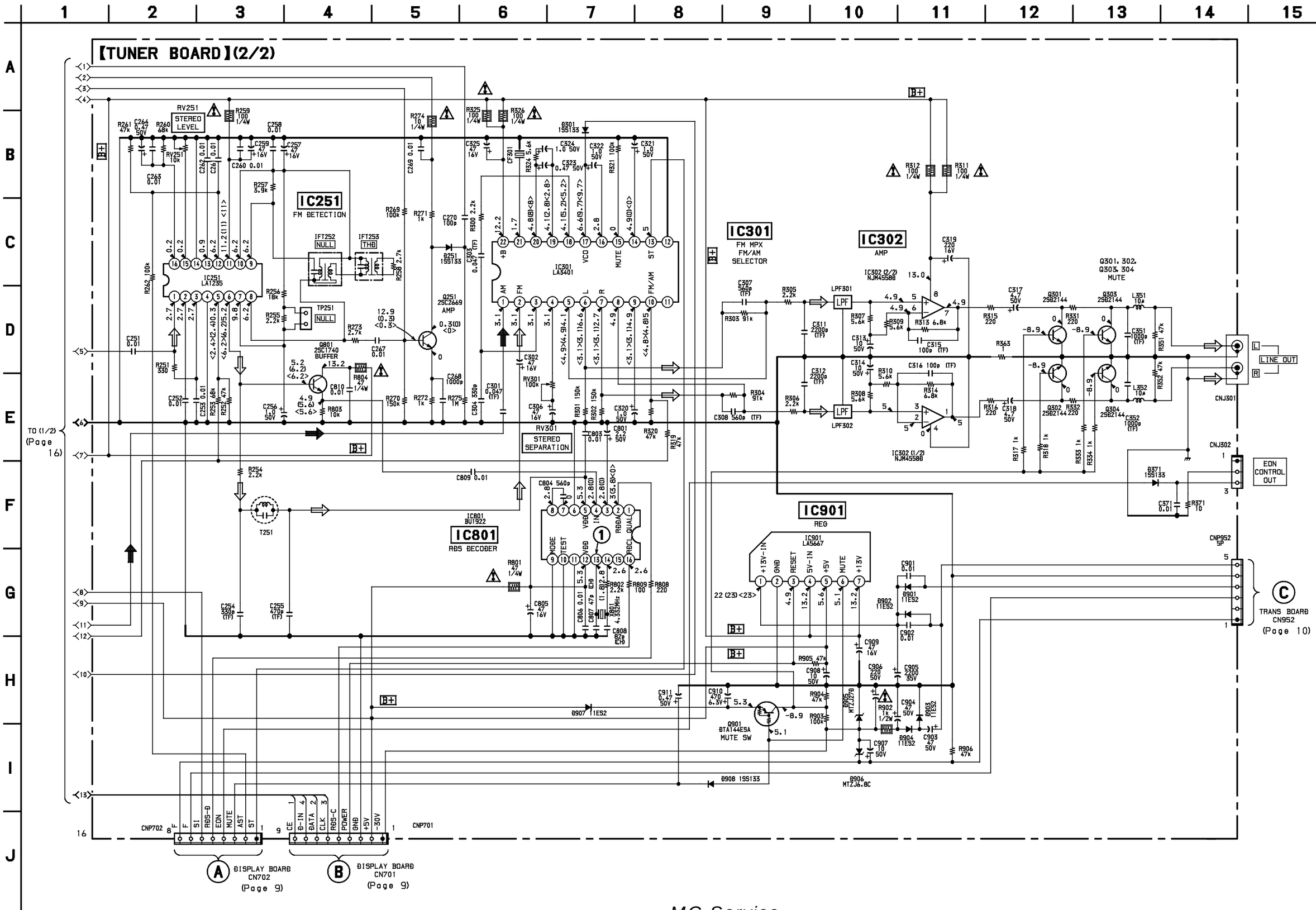
Ref. No.	Location
D221	H-3
D251	H-9
D301	C-11
D371	B-12
D401	C-4
D402	E-4
D901	C-8
D902	C-8
D903	C-7
D904	C-7
D905	D-7
D906	H-12
D907	D-7
D908	C-8
IC221	H-2
IC251	H-7
IC301	D-11
IC302	C-10
IC401	D-5
IC801	G-11
IC901	D-8
Q200	G-3
Q201	H-4
Q202	H-4
Q204	H-4
Q205	H-5
Q231	G-5
Q232	G-5
Q233	G-4
Q234	H-6
Q235	G-6
Q236	G-6
Q237	G-6
Q251	H-9
Q301	B-10
Q302	B-9
Q303	B-8
Q304	B-8
Q401	E-6
Q402	C-5
Q403	C-5
Q404	D-5
Q405	C-5
Q521	E-8
Q522	E-8
Q523	E-8
Q801	E-11
Q901	D-7

4-5. SCHEMATIC DIAGRAM – TUNER SECTION (1/2) –

• See page 20 for IC Block Diagrams.



4-6. SCHEMATIC DIAGRAM – TUNER SECTION (2/2) – • See page 8 for Waveforms. • See page 20 for IC Block Diagrams.



MC-Service

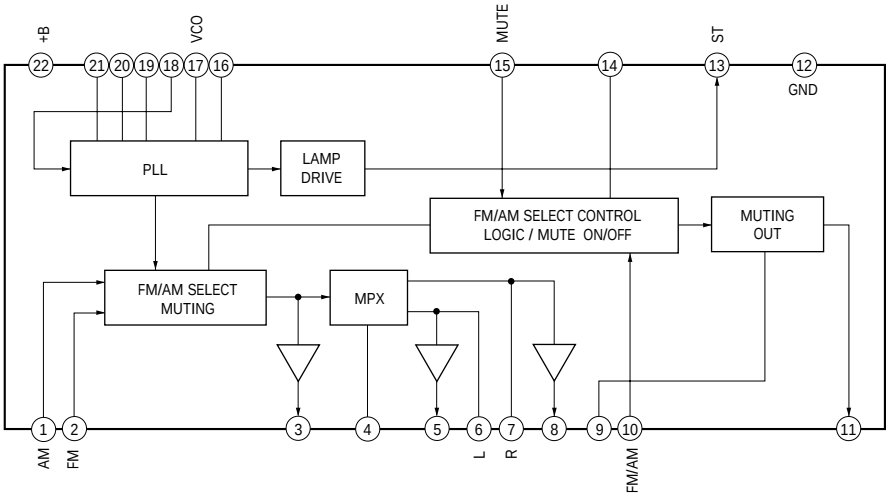
4-7. IC PIN FUNCTION (DISPLAY BOARD)

• IC701 System Control (μPD780205GF-040-3BA)

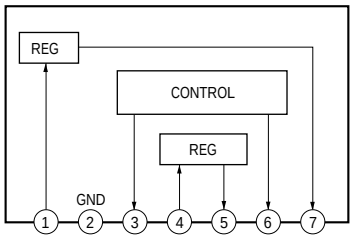
Pin No.	Pin Name	I/O	Function
1	VDD	—	Power supply (+5V).
2	$\overline{\text{ANT}}$	—	Not used. (Open)
3	$\overline{\text{ATT}}$	—	Not used. (Open)
4	$\overline{\text{BAND1}}$	—	Not used. (Open)
5	$\overline{\text{BAND2}}$	—	Not used. (Open)
6	IF-B	—	Not used. (Open)
7	NC	—	Not used. (Open)
8	MONO	—	Not used. (Open)
9	$\overline{\text{TUN}}$	—	Not used. (Open)
10	$\overline{\text{RESET}}$	I	System reset input.
11	X2	O	Oscillation signal output (4.19MHz).
12	X1	I	Oscillation signal input (4.19MHz).
13	GND	—	Ground.
14	NC	—	Not used. (Open)
15	$\overline{\text{LOCK}}$	I	Lock signal input.
16	VDD	—	Power supply (+5V).
17	$\overline{\text{CLK}}$	O	PLL clock to FE101.
18	DATA	O	PLL data to FE101.
19	D-IN	I	PLL data from FE101.
20	CE	O	PLL Latch to FE101.
21	$\overline{\text{BLN}}$	—	Not used. (Open)
22	$\overline{\text{ST}}$	I	Stereo display detection.
23	CAL	—	Not used. (Open)
24	AST	I	Auto stop signal detection.
25	AVSS	—	Ground.(Analog)
26	MUTE	O	Muting signal output.
27	EON	O	External control.
28	$\overline{\text{PGM}}$	—	Not used. (Open)
29	DATA RDS	I	RDS data input.
30	R2	O	Rotary encoder phase detection.
31	KEY 2	I	Key input.
32	KEY 1	I	Key input.
33	SI	I	Signal input.
34	AVDD	—	Analog power supply (+5V).
35	AVREF	I	Reference voltage (+5V).
36	$\overline{\text{RIN}}$	I	Remote control input.
37	R1	I	Rotary encoder number of rotation detection.
38	$\overline{\text{RDS CLK}}$	I	RDS data clock input.
39	$\overline{\text{POWER}}$	I	Power supply ON/OFF monitor.
40	GND	—	Ground.
41 to 46	IS 1 to 5	I	Model detection.
47 to 78	P1 to P32	O	Fluorescent indicator tube, segment drive.
79	V LOAD	—	Power supply (-30V).
80 to 84	P33 to P37	O	Drives indication tube.
85 to 100	G1 to G16	O	Fluorescent indicator tube, grid drive.

4-8. IC BLOCK DIAGRAMS (TUNER BOARD)

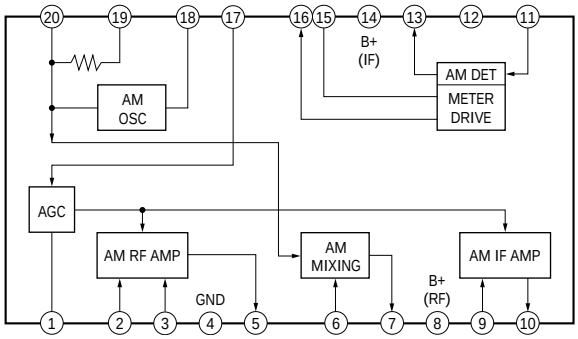
IC301 LA3401



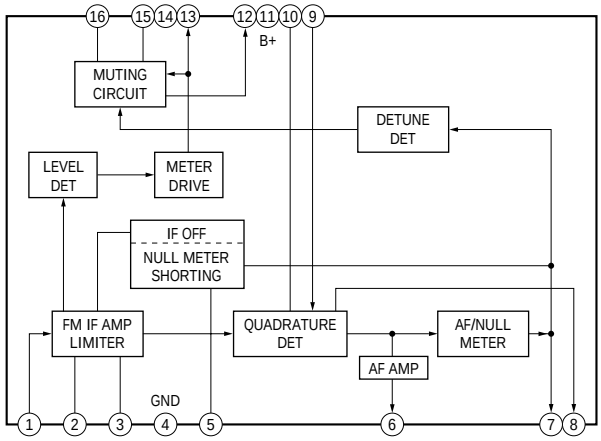
IC901 LA5667



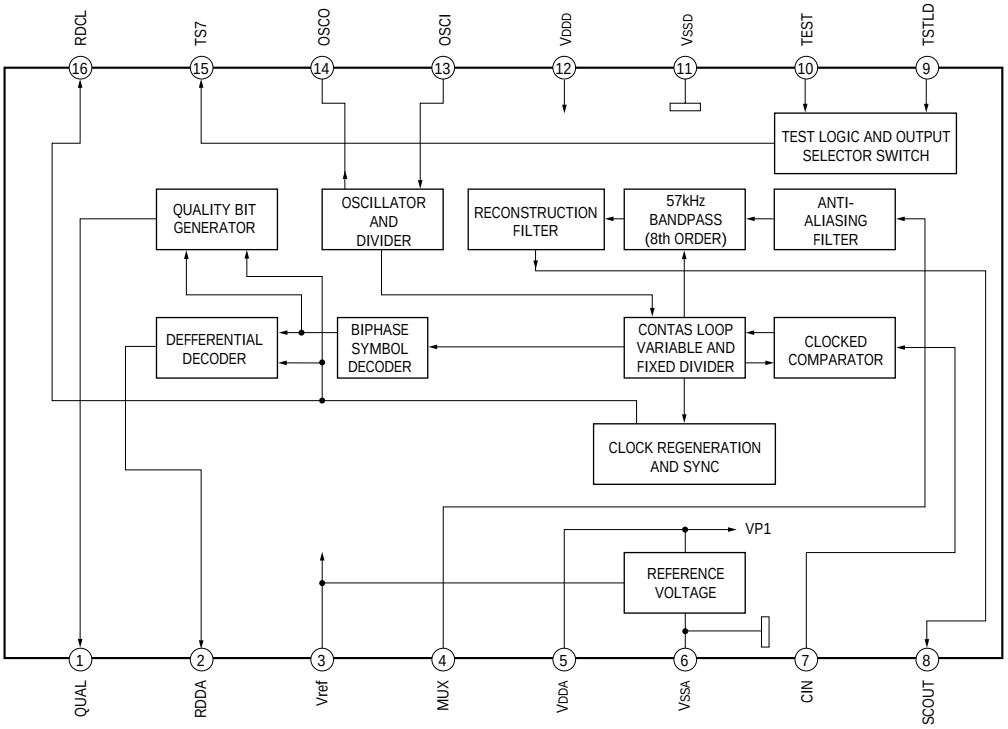
IC401 LA1245



IC221, IC251 LA1235



IC801 BU1992



SECTION 5
EXPLODED VIEWS

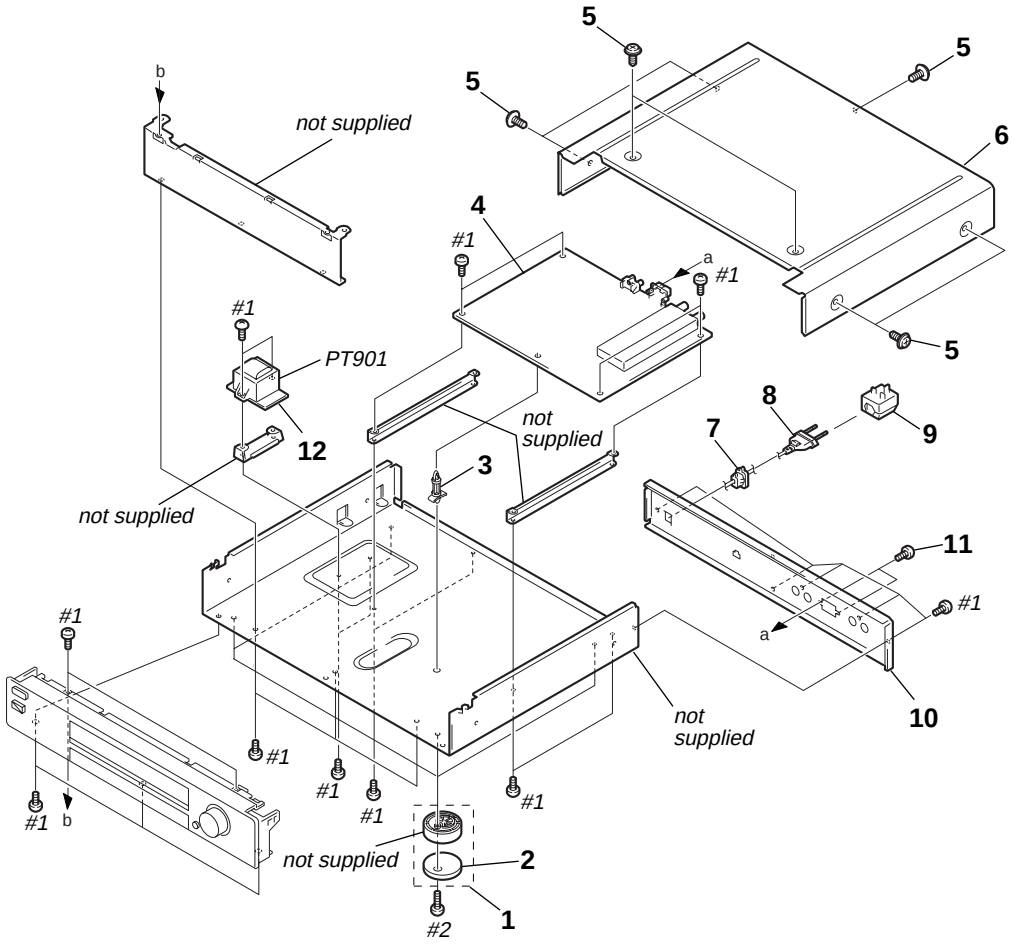
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts of Color Cabinet's Color
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

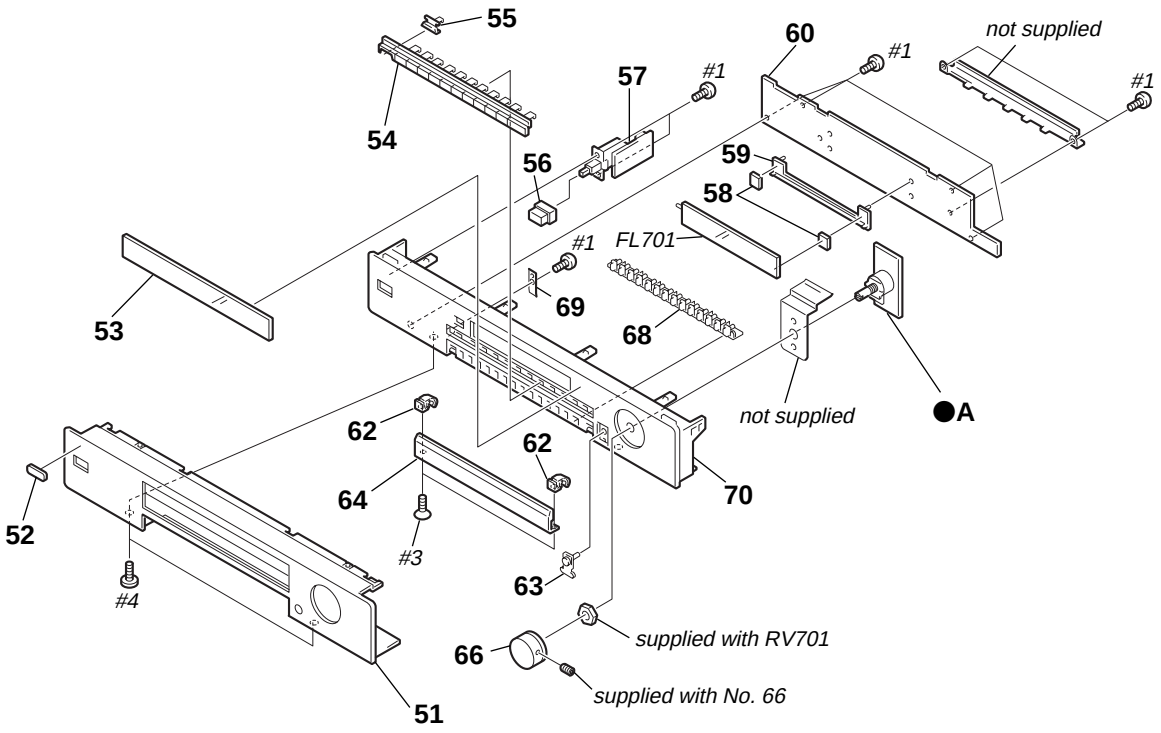
5-1. FRONT PANEL AND CASE SECTION



Ref. No.	Part No.	Description	Remarks
1	X-4949-523-1	FOOT ASSY (F50180S)	
2	4-970-124-01	CUSHION (F50180S)	
* 3	3-703-353-06	SUPPORT, PC BOARD	
* 4	A-4407-370-A	TUNER BOARD, COMPLETE	
5	3-710-901-01	SCREW, TAPPING (SILVER)	
5	3-710-901-11	SCREW, TAPPING (BLACK)	
* 6	4-998-495-01	CASE (407026) (BLACK)	
6	4-998-495-21	CASE (407026) (SILVER)	
7	3-703-244-00	BUSHING, CORD	
⚠ 8	1-575-651-21	CORD, POWER	
⚠ 9	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)	
* 10	4-998-494-01	PANEL, BACK (AEP)	
* 10	4-998-494-11	PANEL, BACK (UK)	
11	3-704-515-01	SCREW (BV/RING)	
* 12	1-669-149-11	TRANS BOARD	
⚠ PT901	1-423-525-11	TRANSFORMER, POWER	

5-2. PANEL AND DISPLAY SECTION

●A : ENCODER BOARD (supplied with DISPLAY BOARD)



Ref. No.	Part No.	Description	Remarks
51	4-998-493-01	PANEL, FRONT (BLACK)	
51	4-998-493-11	PANEL, FRONT (SILVER)	
52	4-942-568-41	EMBLEM (NO.5), SONY	
53	4-998-489-01	PLATE (C), INDICATION	
54	4-998-486-01	BUTTON (A)	
55	4-999-566-01	BUTTON (S)	
56	3-024-055-01	BUTTON (POWER)(BLACK)	
56	3-024-055-21	BUTTON (POWER)(SILVER)	
* 57	1-668-810-11	POWER SW BOARD	
* 58	4-998-481-01	INSULATED PLATE (DS)	
* 59	4-945-292-01	HOLDER,INDICATION TUBE	
* 60	A-4407-371-A	DISPLAY BOARD, COMPLETE	
62	4-998-485-01	HINGE (BLACK)	
62	4-998-485-11	HINGE (SILVER)	
63	4-998-488-01	BUTTON (C) (BLACK)	
63	4-998-488-11	BUTTON (C) (SILVER)	
64	4-998-492-01	DOOR (BLACK)	
64	4-998-492-11	DOOR (SILVER)	
66	4-998-491-01	KNOB (R41) (BLACK)	
66	4-998-491-11	KNOB (R41) (SILVER)	
68	4-998-487-01	BUTTON (B) (BLACK)	
68	4-998-487-11	BUTTON (B) (SILVER)	
69	4-998-484-01	SPRING, CLICK	
70	4-998-490-01	BASE, PANEL (BLACK)	
70	4-998-490-11	BASE, PANEL (SILVER)	
FL701	1-517-177-21	FLUORESCENT INDICATOR TUBE	

DISPLAY

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... , uPB... , µPB... , uPC... , µPC... , uPD..., µPD...

Ref. No.	Part No.	Description			Remarks
*	A-4407-371-A	DISPLAY BOARD, COMPLETE			
		**********			
		(including ENCODER BOARD)			
*	4-945-292-01	HOLDER, INDICATION TUBE			
	4-998-481-01	INSULATED PLATE (DS)			
		< CAPACITOR >			
C701	1-162-306-11	CERAMIC	0.01uF	20%	16V
C702	1-162-306-11	CERAMIC	0.01uF	20%	16V
C703	1-162-209-31	CERAMIC	27PF	5%	50V
C704	1-162-209-31	CERAMIC	27PF	5%	50V
C705	1-162-306-11	CERAMIC	0.01uF	20%	16V
C706	1-164-159-21	CERAMIC	0.1uF		50V
C707	1-126-947-11	ELECT	47uF	20%	35V
C708	1-162-306-11	CERAMIC	0.01uF	20%	16V
C709	1-162-306-11	CERAMIC	0.01uF	20%	16V
C710	1-126-964-11	ELECT	10uF	20%	50V
C711	1-126-964-11	ELECT	10uF	20%	50V
C712	1-104-905-11	CAPACITOR	0.22F		5.5V
C713	1-162-306-11	CERAMIC	0.01uF	20%	16V
C714	1-126-959-11	ELECT	0.47uF	20%	50V
C717	1-162-286-21	CERAMIC	220PF	10%	50V
		< FILTER >			
FL701	1-517-177-21	INDICATOR TUBE, FLUORESCENT			
		< DIODE >			
D701	8-719-991-33	DIODE 1SS133T-77			
D702	8-719-991-33	DIODE 1SS133T-77			
D703	8-719-991-33	DIODE 1SS133T-77			
D705	8-719-991-33	DIODE 1SS133T-77			
D707	8-719-991-33	DIODE 1SS133T-77			
		< IC >			
IC701	8-759-495-96	IC uPD780205GF-040-3BA			
IC702	8-749-014-66	IC NJL56H400A			
		< TRANSISTOR >			
Q701	8-729-119-78	TRANSISTOR 2SC403SP-51			
		< RESISTOR >			
R701	1-249-437-11	CARBON	47K	5%	1/4W
R702	1-249-429-11	CARBON	10K	5%	1/4W
R703	1-249-429-11	CARBON	10K	5%	1/4W
R704	1-249-419-11	CARBON	1.5K	5%	1/4W F
R705	1-249-419-11	CARBON	1.5K	5%	1/4W F

Ref. No.	Part No.	Description			Remarks
R707	1-249-441-11	CARBON	100K	5%	1/4W
R708	1-249-441-11	CARBON	100K	5%	1/4W
R709	1-247-807-31	CARBON	100	5%	1/4W
R710	1-249-406-11	CARBON	120	5%	1/4W F
R711	1-249-406-11	CARBON	120	5%	1/4W F
R712	1-249-407-11	CARBON	150	5%	1/4W F
R713	1-249-408-11	CARBON	180	5%	1/4W F
R714	1-247-815-91	CARBON	220	5%	1/4W
R715	1-249-410-11	CARBON	270	5%	1/4W F
R716	1-249-411-11	CARBON	330	5%	1/4W
R717	1-249-413-11	CARBON	470	5%	1/4W F
R718	1-249-414-11	CARBON	560	5%	1/4W F
R719	1-249-416-11	CARBON	820	5%	1/4W F
R720	1-249-418-11	CARBON	1.2K	5%	1/4W F
R721	1-249-421-11	CARBON	2.2K	5%	1/4W F
R722	1-249-424-11	CARBON	3.9K	5%	1/4W F
R723	1-249-430-11	CARBON	12K	5%	1/4W
R724	1-247-807-31	CARBON	100	5%	1/4W
R725	1-249-406-11	CARBON	120	5%	1/4W F
R726	1-249-406-11	CARBON	120	5%	1/4W F
R727	1-249-407-11	CARBON	150	5%	1/4W F
R728	1-249-408-11	CARBON	180	5%	1/4W F
R729	1-247-815-91	CARBON	220	5%	1/4W
R730	1-249-410-11	CARBON	270	5%	1/4W F
R731	1-249-411-11	CARBON	330	5%	1/4W
R732	1-249-413-11	CARBON	470	5%	1/4W F
R733	1-249-414-11	CARBON	560	5%	1/4W F
R734	1-249-416-11	CARBON	820	5%	1/4W F
R735	1-249-418-11	CARBON	1.2K	5%	1/4W F
R736	1-249-421-11	CARBON	2.2K	5%	1/4W F
R737	1-249-424-11	CARBON	3.9K	5%	1/4W F
⚠R738	1-249-401-11	CARBON	47	5%	1/4W F
R739	1-249-417-11	CARBON	1K	5%	1/4W F
R740	1-247-863-91	CARBON	22K	5%	1/4W
R741	1-247-895-91	CARBON	470K	5%	1/4W
R742	1-249-413-11	CARBON	470	5%	1/4W F
R743	1-249-413-11	CARBON	470	5%	1/4W F
R744	1-249-413-11	CARBON	470	5%	1/4W F
R745	1-249-413-11	CARBON	470	5%	1/4W F
R746	1-249-413-11	CARBON	470	5%	1/4W F
R747	1-249-413-11	CARBON	470	5%	1/4W F
R749	1-249-413-11	CARBON	470	5%	1/4W F
R750	1-249-413-11	CARBON	470	5%	1/4W F
R751	1-249-413-11	CARBON	470	5%	1/4W F
R752	1-249-413-11	CARBON	470	5%	1/4W F
R753	1-249-413-11	CARBON	470	5%	1/4W F
R754	1-249-413-11	CARBON	470	5%	1/4W F
R755	1-247-807-31	CARBON	100	5%	1/4W
R756	1-247-807-31	CARBON	100	5%	1/4W

DISPLAY **POWER SW** **TRANS** **TUNER**

Ref. No.	Part No.	Description	Remarks
		< VARIABLE RESISTOR >	
RV701	1-466-336-21	ENCODER, ROTARY (TUNING/SELECT)	
		< SWITCH >	
S701	1-554-303-21	SWITCH, TACTILE (SHIFT)	
S702	1-554-303-21	SWITCH, TACTILE (1)	
S703	1-554-303-21	SWITCH, TACTILE (2)	
S704	1-554-303-21	SWITCH, TACTILE (3)	
S705	1-554-303-21	SWITCH, TACTILE (4)	
S706	1-554-303-21	SWITCH, TACTILE (5)	
S707	1-554-303-21	SWITCH, TACTILE (6)	
S708	1-554-303-21	SWITCH, TACTILE (7)	
S709	1-554-303-21	SWITCH, TACTILE (8)	
S710	1-554-303-21	SWITCH, TACTILE (9)	
S711	1-554-303-21	SWITCH, TACTILE (0)	
S712	1-554-303-21	SWITCH, TACTILE (DIRECT)	
S713	1-554-303-21	SWITCH, TACTILE (MENU)	
S714	1-554-303-21	SWITCH, TACTILE (RETURN)	
S715	1-554-303-21	SWITCH, TACTILE (ENTER)	
S717	1-554-303-21	SWITCH, TACTILE (DISPLAY)	
S718	1-554-303-21	SWITCH, TACTILE (PTY)	
S719	1-554-303-21	SWITCH, TACTILE (TA)	
S720	1-554-303-21	SWITCH, TACTILE (NEWS/INFO)	
S721	1-554-303-21	SWITCH, TACTILE (AUTO-BETICAL SELECT)	
S722	1-554-303-21	SWITCH, TACTILE (MEMORY)	
S723	1-554-303-21	SWITCH, TACTILE (BAND)	
S724	1-554-303-21	SWITCH, TACTILE (ON/OFF)	
S725	1-554-303-21	SWITCH, TACTILE (ANTENNA)	
S726	1-554-303-21	SWITCH, TACTILE (FM MODE)	
S727	1-554-303-21	SWITCH, TACTILE (CHARACTER)	
S728	1-554-303-21	SWITCH, TACTILE (TUNING MODE)	
		< VIBRATOR >	
X701	1-760-422-11	VIBRATOR, CRYSTAL (4.19MHz)	
**********			
*	1-668-810-11	POWER SW BOARD **********	
		< CAPACITOR >	
⚠C951	1-113-915-11	CERAMIC 0.001uF 20% 250V	
		< SWITCH >	
⚠S901	1-572-267-51	SWITCH, PUSH (AC POWER)(1 KEY)	
**********			
*	1-669-149-11	TRANS BOARD **********	
		< CAPACITOR >	
⚠C952	1-162-306-11	CERAMIC 0.01uF 20% 16V	
		< CONNECTOR >	
CNP901	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P	
CNP951	1-564-321-00	PIN, CONNECTOR 2P	

Ref. No.	Part No.	Description	Remarks
		< EARTH >	
ECP900	1-690-880-51	LEAD (WITH CONNECTOR)	
		< TRANSFORMER >	
⚠PT901	1-423-525-11	TRANSFORMER, POWER	
**********			
*	A-4407-370-A	TUNER BOARD, COMPLETE **********	
	7-685-872-09	SCREW +BVTT 3×8 (S)	
		< CAPACITOR >	
C102	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C103	1-126-967-11	ELECT 47uF 20% 16V	
C104	1-126-967-11	ELECT 47uF 20% 16V	
C200	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C201	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C202	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C203	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C204	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C221	1-162-288-31	CERAMIC 330PF 10% 50V	
C222	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C223	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C224	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C225	1-126-967-11	ELECT 47uF 20% 16V	
C226	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C227	1-126-956-91	ELECT 0.1uF 20% 50V	
C231	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C232	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C235	1-162-215-31	CERAMIC 47PF 5% 50V	
C236	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C237	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C251	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C252	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C253	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C254	1-110-341-11	MYLAR 330PF 5% 50V	
C255	1-130-467-00	MYLAR 470PF 5% 50V	
C256	1-126-960-11	ELECT 1uF 20% 50V	
C257	1-126-967-11	ELECT 47uF 20% 16V	
C258	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C259	1-126-967-11	ELECT 47uF 20% 16V	
C260	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C261	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C262	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C263	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C264	1-126-959-11	ELECT 0.47uF 20% 50V	
C267	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C268	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C269	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C270	1-162-282-31	CERAMIC 100PF 10% 50V	
C301	1-136-161-00	FILM 0.047uF 5% 50V	
C302	1-126-967-11	ELECT 47uF 20% 16V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
C303	1-136-161-00	FILM	0.047uF	5%	50V
C304	1-162-288-31	CERAMIC	330PF	10%	50V
C306	1-126-967-11	ELECT	47uF	20%	16V
C307	1-130-468-00	MYLAR	560PF	5%	50V
C308	1-130-468-00	MYLAR	560PF	5%	50V
C311	1-130-475-00	MYLAR	0.0022uF	5%	50V
C312	1-130-475-00	MYLAR	0.0022uF	5%	50V
C313	1-126-964-11	ELECT	10uF	20%	50V
C314	1-126-964-11	ELECT	10uF	20%	50V
C315	1-110-335-11	MYLAR	100PF	5%	50V
C316	1-110-335-11	MYLAR	100PF	5%	50V
C317	1-126-963-11	ELECT	4.7uF	20%	50V
C318	1-126-963-11	ELECT	4.7uF	20%	50V
C319	1-126-934-11	ELECT	220uF	20%	16V
C320	1-126-960-11	ELECT	1uF	20%	50V
C321	1-126-960-11	ELECT	1uF	20%	50V
C322	1-126-960-11	ELECT	1uF	20%	50V
C323	1-126-959-11	ELECT	0.47uF	20%	50V
C324	1-126-960-11	ELECT	1uF	20%	50V
C325	1-126-967-11	ELECT	47uF	20%	16V
C351	1-130-471-00	MYLAR	0.001uF	5%	50V
C352	1-130-471-00	MYLAR	0.001uF	5%	50V
C371	1-162-306-11	CERAMIC	0.01uF	20%	16V
C400	1-162-211-31	CERAMIC	33PF	5%	50V
C401	1-162-306-11	CERAMIC	0.01uF	20%	16V
C402	1-162-306-11	CERAMIC	0.01uF	20%	16V
C403	1-162-306-11	CERAMIC	0.01uF	20%	16V
C404	1-126-967-11	ELECT	47uF	20%	16V
C405	1-162-306-11	CERAMIC	0.01uF	20%	16V
C406	1-162-306-11	CERAMIC	0.01uF	20%	16V
C407	1-162-306-11	CERAMIC	0.01uF	20%	16V
C408	1-162-306-11	CERAMIC	0.01uF	20%	16V
C409	1-162-294-31	CERAMIC	0.001uF	10%	50V
C410	1-162-306-11	CERAMIC	0.01uF	20%	16V
C411	1-126-967-11	ELECT	47uF	20%	16V
C412	1-126-960-11	ELECT	1uF	20%	50V
C413	1-126-960-11	ELECT	1uF	20%	50V
C414	1-126-960-11	ELECT	1uF	20%	50V
C415	1-126-962-11	ELECT	3.3uF	20%	50V
C418	1-162-306-11	CERAMIC	0.01uF	20%	16V
C419	1-162-294-31	CERAMIC	0.001uF	10%	50V
C420	1-162-306-11	CERAMIC	0.01uF	20%	16V
C421	1-136-161-00	FILM	0.047uF	5%	50V
C422	1-102-508-91	CERAMIC	10PF	0.5PF	50V
C423	1-102-973-00	CERAMIC	100PF	5%	50V
C424	1-162-306-11	CERAMIC	0.01uF	20%	16V
C425	1-126-964-11	ELECT	10uF	20%	50V
C427	1-130-471-00	MYLAR	0.001uF	5%	50V
C428	1-162-211-31	CERAMIC	33PF	5%	50V
C429	1-162-306-11	CERAMIC	0.01uF	20%	16V
C430	1-162-294-31	CERAMIC	0.001uF	10%	50V
C801	1-126-961-11	ELECT	2.2uF	20%	50V
C803	1-162-306-11	CERAMIC	0.01uF	20%	16V
C804	1-162-291-31	CERAMIC	560PF	10%	50V
C805	1-126-967-11	ELECT	47uF	20%	16V
C806	1-162-306-11	CERAMIC	0.01uF	20%	16V
C807	1-102-852-91	CERAMIC	47PF	5%	50V
C808	1-102-527-11	CERAMIC	82PF	5%	50V
C809	1-162-306-11	CERAMIC	0.01uF	20%	16V
C810	1-162-306-11	CERAMIC	0.01uF	20%	16V

Ref. No.	Part No.	Description			Remarks
C901	1-101-004-00	CERAMIC	0.01uF		50V
C902	1-101-004-00	CERAMIC	0.01uF		50V
C903	1-126-967-11	ELECT	47uF	20%	50V
C904	1-126-967-11	ELECT	47uF	20%	50V
C905	1-126-953-11	ELECT	2200uF	20%	35V
C906	1-126-969-11	ELECT	220uF	20%	50V
C907	1-126-964-11	ELECT	10uF	20%	50V
C908	1-126-964-11	ELECT	10uF	20%	50V
C909	1-126-967-11	ELECT	47uF	20%	16V
C910	1-126-935-11	ELECT	470uF	20%	6.3V
C911	1-126-959-11	ELECT	0.47uF	20%	50V

< FILTER >

CF201	1-567-389-11	FILTER, CERAMIC
CF202	1-567-389-11	FILTER, CERAMIC
CF203	1-567-389-11	FILTER, CERAMIC
CF231	1-579-554-31	FILTER, CERAMIC
CF301	1-567-250-11	OSCILLATOR, CERAMIC
CF402	1-527-981-00	FILTER, CERAMIC

< JACK >

CNJ301	1-778-940-11	JACK 2P (LINE OUT)
CNJ302	1-566-212-11	PIN, CONNECTOR 3P (EON CONTROL OUT)

< CONNECTOR >

*	CNP701	1-568-936-11	PIN, CONNECTOR 9P
*	CNP702	1-568-935-11	PIN, CONNECTOR 8P
	CNP952	1-766-267-11	PIN, CONNECTOR (PC BOARD) 5P

< DIODE >

D221	8-719-991-33	DIODE 1SS133T-77
D251	8-719-991-33	DIODE 1SS133T-77
D301	8-719-991-33	DIODE 1SS133T-77
D371	8-719-991-33	DIODE 1SS133T-77
D401	8-719-991-33	DIODE 1SS133T-77
D402	8-719-991-33	DIODE 1SS133T-77
D901	8-719-200-82	DIODE 11ES2
D902	8-719-200-82	DIODE 11ES2
D903	8-719-200-82	DIODE 11ES2
D904	8-719-200-82	DIODE 11ES2
D905	8-719-110-69	DIODE RD27ES-B4
D906	8-719-109-97	DIODE RD6.8ES-B2
D907	8-719-200-82	DIODE 11ES2
D908	8-719-991-33	DIODE 1SS133T-77

< FRONTEND >

FE101	1-233-524-11	ENCAPSULATED COMPONENT
FE401	1-233-525-11	ENCAPSULATED COMPONENT

< IC >

IC221	8-759-812-35	IC LA1235
IC251	8-759-812-35	IC LA1235
IC301	8-759-801-80	IC LA3401
IC302	8-759-634-51	IC M5218AP
IC401	8-759-812-45	IC LA1245
IC801	8-759-450-86	IC BU1922
IC901	8-759-820-09	IC LA5667

TUNER

Ref. No.	Part No.	Description				Remarks
		< IFT >				
IFT252	1-404-845-11	COIL, DISCRI (PRIMARY)				
IFT253	1-404-846-11	COIL, DISCRI (SECONDARY)				
IFT401	1-404-713-11	TRANSFORMER, IF				
		< COIL >				
L201	1-410-521-11	INDUCTOR	100uH			
L351	1-410-509-11	INDUCTOR	10uH			
L352	1-410-509-11	INDUCTOR	10uH			
L400	1-414-142-11	INDUCTOR	1uH			
L401	1-410-521-11	INDUCTOR	100uH			
		< FILTER >				
LPF301	1-235-164-00	FILTER, LOW PASS				
LPF302	1-235-164-00	FILTER, LOW PASS				
		< TRANSISTOR >				
Q200	8-729-216-13	TRANSISTOR	2SK161-GR			
Q201	8-729-230-99	TRANSISTOR	2SC2669-OY			
Q202	8-729-230-99	TRANSISTOR	2SC2669-OY			
Q204	8-729-230-99	TRANSISTOR	2SC2669-OY			
Q205	8-729-230-99	TRANSISTOR	2SC2669-OY			
Q231	8-729-030-02	TRANSISTOR	DTC144ESA			
Q232	8-729-030-02	TRANSISTOR	DTC144ESA			
Q233	8-729-030-02	TRANSISTOR	DTC144ESA			
Q234	8-729-119-78	TRANSISTOR	2SC403SP-51			
Q235	8-729-119-78	TRANSISTOR	2SC403SP-51			
Q236	8-729-230-99	TRANSISTOR	2SC2669-OY			
Q237	8-729-230-99	TRANSISTOR	2SC2669-OY			
Q251	8-729-230-99	TRANSISTOR	2SC2669-OY			
Q301	8-729-922-37	TRANSISTOR	2SD2144S			
Q302	8-729-922-37	TRANSISTOR	2SD2144S			
Q303	8-729-922-37	TRANSISTOR	2SD2144S			
Q304	8-729-922-37	TRANSISTOR	2SD2144S			
Q401	8-729-230-99	TRANSISTOR	2SC2669-OY			
Q402	8-729-231-20	TRANSISTOR	2SK161-YGR			
Q403	8-729-922-37	TRANSISTOR	2SD2144S			
Q404	8-729-922-37	TRANSISTOR	2SD2144S			
Q405	8-729-922-37	TRANSISTOR	2SD2144S			
Q521	8-729-030-02	TRANSISTOR	DTC144ESA			
Q522	8-729-026-41	TRANSISTOR	2SA933AS-QRT			
Q523	8-729-119-78	TRANSISTOR	2SC403SP-51			
Q801	8-729-119-78	TRANSISTOR	2SC403SP-51			
Q901	8-729-029-56	TRANSISTOR	DTA144ESA			
		< RESISTOR >				
R101	1-249-417-11	CARBON	1K	5%	1/4W	F
⚠R102	1-249-405-11	CARBON	100	5%	1/4W	F
⚠R103	1-249-393-11	CARBON	10	5%	1/4W	F
R104	1-247-863-91	CARBON	22K	5%	1/4W	
R105	1-249-437-11	CARBON	47K	5%	1/4W	
R200	1-249-408-11	CARBON	180	5%	1/4W	F
R201	1-249-407-11	CARBON	150	5%	1/4W	F
R202	1-249-411-11	CARBON	330	5%	1/4W	
R203	1-249-411-11	CARBON	330	5%	1/4W	
R204	1-249-431-11	CARBON	15K	5%	1/4W	

Ref. No.	Part No.	Description				Remarks
R205	1-249-411-11	CARBON	330	5%	1/4W	
R206	1-249-413-11	CARBON	470	5%	1/4W	F
R207	1-249-411-11	CARBON	330	5%	1/4W	
R208	1-247-863-91	CARBON	22K	5%	1/4W	
R209	1-249-411-11	CARBON	330	5%	1/4W	
R210	1-249-431-11	CARBON	15K	5%	1/4W	
R211	1-249-411-11	CARBON	330	5%	1/4W	
R212	1-249-411-11	CARBON	330	5%	1/4W	
R213	1-247-863-91	CARBON	22K	5%	1/4W	
R214	1-249-441-11	CARBON	100K	5%	1/4W	
R221	1-249-413-11	CARBON	470	5%	1/4W	F
⚠R222	1-249-405-11	CARBON	100	5%	1/4W	F
R223	1-247-883-00	CARBON	150K	5%	1/4W	
R231	1-249-411-11	CARBON	330	5%	1/4W	
R232	1-249-431-11	CARBON	15K	5%	1/4W	
R233	1-249-411-11	CARBON	330	5%	1/4W	
R234	1-249-395-11	CARBON	15	5%	1/4W	F
R235	1-247-863-91	CARBON	22K	5%	1/4W	
R238	1-249-429-11	CARBON	10K	5%	1/4W	
R239	1-249-429-11	CARBON	10K	5%	1/4W	
R240	1-249-431-11	CARBON	15K	5%	1/4W	
R241	1-249-429-11	CARBON	10K	5%	1/4W	
R242	1-249-429-11	CARBON	10K	5%	1/4W	
R243	1-247-807-31	CARBON	100	5%	1/4W	
R244	1-249-405-11	CARBON	100	5%	1/4W	F
R245	1-249-405-11	CARBON	100	5%	1/4W	F
R246	1-249-405-11	CARBON	100	5%	1/4W	F
R251	1-249-411-11	CARBON	330	5%	1/4W	
R252	1-249-437-11	CARBON	47K	5%	1/4W	
R253	1-249-439-11	CARBON	68K	5%	1/4W	
R254	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R255	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R256	1-249-432-11	CARBON	18K	5%	1/4W	
R257	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R258	1-249-422-11	CARBON	2.7K	5%	1/4W	F
⚠R259	1-249-405-11	CARBON	100	5%	1/4W	F
R260	1-249-439-11	CARBON	68K	5%	1/4W	
R261	1-249-437-11	CARBON	47K	5%	1/4W	
R262	1-249-441-11	CARBON	100K	5%	1/4W	
R269	1-249-441-11	CARBON	100K	5%	1/4W	
R270	1-247-883-00	CARBON	150K	5%	1/4W	
R271	1-249-417-11	CARBON	1K	5%	1/4W	F
R272	1-249-417-11	CARBON	1K	5%	1/4W	F
R273	1-249-422-11	CARBON	2.7K	5%	1/4W	F
⚠R274	1-249-393-11	CARBON	10	5%	1/4W	F
R275	1-247-903-00	CARBON	1M	5%	1/4W	
R300	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R301	1-247-883-00	CARBON	150K	5%	1/4W	
R302	1-247-883-00	CARBON	150K	5%	1/4W	
R303	1-247-878-00	CARBON	91K	5%	1/4W	
R304	1-247-878-00	CARBON	91K	5%	1/4W	
R305	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R306	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R307	1-249-426-11	CARBON	5.6K	5%	1/4W	
R308	1-249-426-11	CARBON	5.6K	5%	1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
R309	1-249-426-11	CARBON	5.6K	5% 1/4W	
R310	1-249-426-11	CARBON	5.6K	5% 1/4W	
⚠R311	1-249-405-11	CARBON	100	5% 1/4W	F
⚠R312	1-249-405-11	CARBON	100	5% 1/4W	F
R313	1-249-427-11	CARBON	6.8K	5% 1/4W	F
R314	1-249-427-11	CARBON	6.8K	5% 1/4W	F
R315	1-247-815-91	CARBON	220	5% 1/4W	
R316	1-247-815-91	CARBON	220	5% 1/4W	
R317	1-249-417-11	CARBON	1K	5% 1/4W	F
R318	1-249-417-11	CARBON	1K	5% 1/4W	F
R319	1-249-437-11	CARBON	47K	5% 1/4W	
R320	1-249-437-11	CARBON	47K	5% 1/4W	
R321	1-249-441-11	CARBON	100K	5% 1/4W	
R324	1-249-426-11	CARBON	5.6K	5% 1/4W	
⚠R325	1-249-405-11	CARBON	100	5% 1/4W	F
⚠R326	1-249-405-11	CARBON	100	5% 1/4W	F
R331	1-247-815-91	CARBON	220	5% 1/4W	
R332	1-247-815-91	CARBON	220	5% 1/4W	
R333	1-249-417-11	CARBON	1K	5% 1/4W	F
R334	1-249-417-11	CARBON	1K	5% 1/4W	F
R351	1-249-437-11	CARBON	47K	5% 1/4W	
R352	1-249-437-11	CARBON	47K	5% 1/4W	
R363	1-249-381-11	CARBON	1	5% 1/4W	F
R371	1-249-393-11	CARBON	10	5% 1/4W	F
R401	1-249-421-11	CARBON	2.2K	5% 1/4W	F
⚠R402	1-249-409-11	CARBON	220	5% 1/4W	F
R404	1-249-413-11	CARBON	470	5% 1/4W	F
R405	1-247-807-31	CARBON	100	5% 1/4W	
R406	1-247-807-31	CARBON	100	5% 1/4W	
R408	1-249-429-11	CARBON	10K	5% 1/4W	
R409	1-249-429-11	CARBON	10K	5% 1/4W	
R410	1-249-430-11	CARBON	12K	5% 1/4W	
R411	1-249-417-11	CARBON	1K	5% 1/4W	F
⚠R412	1-249-407-11	CARBON	150	5% 1/4W	F
R413	1-249-429-11	CARBON	10K	5% 1/4W	
R414	1-249-441-11	CARBON	100K	5% 1/4W	
R415	1-247-883-00	CARBON	150K	5% 1/4W	
R416	1-249-417-11	CARBON	1K	5% 1/4W	F
R419	1-249-422-11	CARBON	2.7K	5% 1/4W	F
R420	1-249-441-11	CARBON	100K	5% 1/4W	
R421	1-249-417-11	CARBON	1K	5% 1/4W	F
R422	1-249-418-11	CARBON	1.2K	5% 1/4W	F
R423	1-249-418-11	CARBON	1.2K	5% 1/4W	F
R424	1-249-421-11	CARBON	2.2K	5% 1/4W	F
R425	1-249-420-11	CARBON	1.8K	5% 1/4W	F
R426	1-249-421-11	CARBON	2.2K	5% 1/4W	F
⚠R429	1-249-393-11	CARBON	10	5% 1/4W	F
R430	1-249-441-11	CARBON	100K	5% 1/4W	
R431	1-249-429-11	CARBON	10K	5% 1/4W	
R521	1-247-843-11	CARBON	3.3K	5% 1/4W	
R522	1-247-863-91	CARBON	22K	5% 1/4W	
⚠R801	1-249-401-11	CARBON	47	5% 1/4W	F
R802	1-249-421-11	CARBON	2.2K	5% 1/4W	F
R803	1-249-429-11	CARBON	10K	5% 1/4W	
⚠R804	1-249-405-11	CARBON	100	5% 1/4W	F
R808	1-247-815-91	CARBON	220	5% 1/4W	
R809	1-247-807-31	CARBON	100	5% 1/4W	
⚠R902	1-247-752-11	CARBON	1K	5% 1/2W	F
R903	1-249-441-11	CARBON	100K	5% 1/4W	
R904	1-249-437-11	CARBON	47K	5% 1/4W	
R905	1-249-437-11	CARBON	47K	5% 1/4W	
R906	1-249-437-11	CARBON	47K	5% 1/4W	

< VARIABLE RESISTOR >

RV221	1-241-765-11	RES, ADJ, CARBON 22K
RV231	1-241-763-11	RES, ADJ, CARBON 4.7K
RV251	1-241-764-11	RES, ADJ, CARBON 10K
RV301	1-241-767-21	RES, ADJ, CARBON 100K
RV402	1-241-764-11	RES, ADJ, CARBON 10K

< TRANSFORMER >

T251	1-235-126-00	ENCAPSULATED COMPONENT

< TERMINAL >

TM401	1-537-897-11	TERMINAL BOARD,PUSH(ANTENNA)2P

< TEST PIN >

TP251	1-766-275-11	PIN, CONNECTOR (PC BOARD) 2P

< VIBRATOR >

X801	1-579-900-21	VIBRATOR, CRYSTAL (4.332MHz)

****

MISCELLANEOUS

****

⚠8	1-575-651-21	CORD, POWER
⚠9	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)
FL701	1-157-117-21	FLUORESCENT INDICATOR TUBE

****

ACCESSORIES & PACKING MATERIALS

****

	1-501-594-11	ANTENNA (FM)
	1-501-721-11	ANTENNA (LOOP)
	1-558-271-11	CORD, CONNECTION
	1-765-383-11	CORD (WITH CONNECTOR)
	3-861-974-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE)
	3-861-974-21	MANUAL, INSTRUCTION(AEP) (GERMAN, DUTCH, SWEDISH, ITALIAN)
	3-861-974-31	MANUAL, INSTRUCTION(AEP) (DANISH, FINNISH)

****

HARDWARE LIST

****

#1	7-685-646-79	SCREW +BVTP	3 × 8 TYPE2 IT-3
#2	7-685-885-09	SCREW +BVTT	4 × 16 (S)
#3	7-685-234-19	SCREW +KTP	2.6 × 8 TYPE2NON-SLIT
#4	7-685-534-19	SCREW +BTP	2.6 × 8 TYPE2 N-S

MC-Service

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.